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10/608,312

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Fadi A. Mahmoud

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MARTINE PENILLA & GENCARELLA, LLP  
710 LAKEWAY DRIVE  
SUITE 200  
SUNNYVALE, CA 94085

EXAMINER

RIAD, AMINE

ART UNIT

PAPER NUMBER

2113

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/608,312	<b>Applicant(s)</b> MAHMOUD ET AL.	
	<b>Examiner</b> Amine Riad	<b>Art Unit</b> 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 14-22 is/are rejected.
- 7) ☒ Claim(s) 11 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) <i>PR</i>                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **Detailed Action**

Claims 1-22 have been presented for examination.

Claims 1-10, 12, 14-22 have been rejected.

Claims 11, 13 have been objected to.

### **Objections**

Claim 14 depends on claim 10. Claim 10 recites logical storage unit, on the other hand claim 14 recites container, and therefore claim 14 is objected to as lacking antecedence from claim 10. Examiner suggests using the same terminology in both claim 10, and claim 14.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by  
Cheston US Patent 6,862,681.

In regard to claim 10, Cheston discloses a method for recovering boot up data,  
comprising:

generating a first logical storage unit (active partition), (Column 6; line18-20

Cheston discloses active (first device) and inactive (alternate device) partitions.),

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configured to be accessible by an operating system; (Column 2; line 62-64 because the first device is bootable Cheston inherently suggests that the first device is accessible by an operating system])  
generating a second logical storage unit (inactive partition) (Since both partitions are included as entries this implies that both partitions were generated) configured to be inaccessible by the operating system ; (Column 5; line 57-60) storing boot up data in the first logical storage unit (Column 2; line 62-64 ["MASTER BOOT RECORD in a first bootable device is copied to an alternate storage" copying from first device to an alternate storage inherently suggests that MASTER BOOT RECORD was stored in the first device ; and copying the boot up data from the first logical storage unit to the second logical storage unit. (Column 5; line 57-60)

In regard to claim 12, Cheston discloses a method for recovering boot up data as recited in claim 10, wherein setting the recovery bit includes receiving input to start recovery of the boot up data. (Column 2; line 65-67) and (Column 3; line 1-2 " The device is accessed and utilized to boot the system" this is interpreted as starting the recovery)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

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be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-8, 15-18, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheston US Patent 6,862,681 in view of McBride US Patent Application Publication 2002/0083367.

In regard to claim 1, Cheston discloses a method for recovering boot up data in a computer system, (Column 2; line 58-59) comprising:

- storing boot up data in a first container that is accessible by an operating system; (Column 2; line 62-64 ["MASTER BOOT RECORD in a first bootable device is copied to an alternate storage" copying from first device to an alternate storage inherently suggests that MASTER BOOT RECORD was stored in the first device. In addition, because the first device is bootable inherently suggests that the first device is accessible by an operating system])
- copying the boot up data from the first, container to a second container that is inaccessible by the operating system ; (Column 5; line 57-60) and
- if boot up using the boot up data from the first container fails , (Figure 4; items 74 and 76).

The difference between the claim and the cheston reference is the fact that Cheston teaches accessing boot up data in a second storage while the claim requires copying boot up data from the secure storage to the first storage then accessing the boot up data in the first storage.

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McBride teaches a computer system which copies boot up data from a second container to the first container, (Paragraph 66; "The copy of the master boot record in the DFI logical drive (second container) is decompressed onto the main logical drive (First container)" decompressed is interpreted as disclosed in the abstract of the application as installed which suggests inherently that an image is being copied). McBride further teaches booting up the computer system using the boot up data copied into the first container from the second container.

(Paragraph 73; "the master boot record on the main logical drive is set to reboot from the main logical drive")

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of copying the boot up data from second container into the first container, and booting the computer system using the data copied to the first container from the second container, taught by McBride, into the boot up recovery method of Cheston. A person of ordinary skill in the art would have been motivated to make this modification because keeping a copy of boot up data in a second storage area inaccessible to the operating system would protect it from being corrupted

In regard to claim 15, Cheston discloses a method for recovering boot up data comprising:

- generating a first container (hidden partition) in a storage system, the first container being inaccessible to the operating system (Column 6; line 6-10)

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- generating a second container (visible partition) in the storage system  
, (Column 6; line 9)
- copying boot up data from the second container to the first container ;  
(Column 5; line 57-60) when input requesting boot recovery is received,
- setting a recovery bit, (Column 2; line 65-66)
- unsetting the recovery bit. (Column 7; line 19 "activating a read only BIOS  
flag locking mechanism to prevent unauthorized setting and resetting of  
the BIOS flag". Cheston discloses locking setting and resetting the flag  
this is interpreted as resetting the flag is done once the recovery is  
finished in case it needs to recover another time)

Cheston does not disclose copying the boot up data from the first container to the second container the first container being inaccessible to an operating system, and booting up the computer system using the boot up data copied into the first container from the second container.

McBride teaches copying the boot up data from the first container to the second container, (Paragraph 66; "The copy of the master boot record in the DFI logical drive is decompressed onto the main logical drive" decompressed is interpreted as disclosed in the abstract of the application as installed which suggests inherently that an image is being copied) booting up the computer system using the boot up data copied into the first container from the second container.

(Paragraph 73; "the master boot record on the main logical drive is set to reboot from the main logical drive")

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of copying the boot up data from first container into the second container, and booting the computer system using the data copied to the first container from the second container, as taught by McBride, into boot up recovery method of Cheston. A person of ordinary skill in the art would have been motivated to make this modification because keeping a copy of boot up data in a first storage area inaccessible to the operating system would protect it from being corrupted.

**Note:** Examiner notes that claim 1 refers to the storage accessible to the operating system as first container and to the storage inaccessible to the operating system as the second container, while claim 15 does the opposite.

In regard to claims 2 and 16, Cheston discloses that the inaccessible container (second for claim 2, and first for claim 16) is an operating system secure sector. (Column 5; line 57-58)

In regard to claims 3 and 17, Cheston discloses that the accessible (first for claim 2, and second for claim 17) container is at least a portion of at least one disk drive. (Column 5; line 57)

In regard to claims 4 and 18, Cheston discloses that the boot data includes at least a master boot record and system files. (Column 2; line 63-64) and (Column



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3; line 2 ["to boot the system" is interpreted that with the MBR there is system files])

In regard to claims 6, 20 and 21, Cheston discloses that the first container is at least a portion of at least one storage device. (Column 5; line 14-16 [this is when the system is trying to boot from the first location before the failure is recognized])

In regard to claim 7, Cheston discloses that the first container is a logical storage unit. (Column 5; line 18-20)

In regard to claim 8, Cheston discloses that the second container is a logical storage unit. (Column 5; line 18-20)

In regard to claim 22, Cheston discloses that the storage system includes at least one disk drive. (Figure 1; item 5)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheston US Patent 6,862,681 in view of Gagne US Patent 6,581,143.

In regard to claim 14, Cheston discloses a method for recovering boot up data as recited in parent claims 10.

Cheston does not disclose copying of the boot up data is managed by firmware being run in a host adapter.

Gagne teaches that firmware within host adapter manages copying data. (Figure 7; item 177)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate management of copying boot up data by firmware contained within host adapter of Gagne into boot up recovery method of Cheston. A person of ordinary skill in the art would have been motivated to make this modification because management of boot up data from host adapter uses fixed size pages to eliminate delay due to queuing, maintains a steady stream of data, and maximizes bandwidth.

Claims 5,9, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheston US Patent 6,862,681 in view of McBride US Patent Application Publication 2002/0083367, and further in view of Gagne US Patent 6,581,143.

In regard to claims 5 and 19, Cheston/McBride discloses a method for recovering boot up data as recited in parent claims 1 and 15.

Cheston/McBride does not disclose that the first container is accessible through firmware on a host adapter.

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Gagne teaches a first container (Figure 1; item 31) is accessible through firmware (Figure 1; item 22) on a host adapter (Figure 1; item 27)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of accessing a container through firmware on a host adapter, as suggested by Gagne, into boot up recovery method of Cheston. A person of ordinary skill in the art would have been motivated to make this modification because accessibility through host adapters offers the ease of connectability to storage devices.

In regard to claim 9, Cheston/McBride discloses a method for recovering boot up data as recited in parent claims 1.

Cheston/McBride does not disclose copying is done by a firmware on a host adapter.

Gagne teaches copying is done by a firmware on a host adapter. (Column 2; line 56-60)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of copying boot up data using firmware on a host adapter, as taught by Gagne, into boot up recovery method of Cheston. A person of ordinary skill in the art would have been motivated to make this modification because copying host adapter uses fixed size pages to eliminate delay due to queuing, maintains a steady stream of data, and maximizes bandwidth.

***Allowable Subject Matter***

Claim 11, 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. patent 6,421,792 teaches most of the limitations, but lacks the hidden partition, on the other hand U.S. patent 5,933,631 contains some elements, but lacks the boot up data recovery See PTO 892.

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amine Riad whose telephone number is 571-272-8185. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ROBERT BEAUSOLIEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100